

## AMENDMENTS TO THE CLAIMS

1.-27. Canceled

28. (New) A method for reducing unspecific binding and/or cross-reactivity and/or disturbing effects of matrices during a specific binding reaction of a binding pair, the method comprising conducting said binding reaction in an aqueous solution for the specific binding reaction, wherein a first binding member of said binding pair recognises its complementary second binding member, said solution comprising

a) a buffer to control pH;

b) a compound A selected from the group consisting of: a compound defined by the general formula  $I R^1 - [CR^2 R^3]_p - O]_q - R^4$ , wherein  $R^1$  is hydrogen or hydroxy group,  $R^2$  for each unit independently is hydrogen or hydroxy group,  $R^3$  is hydrogen, methyl group, ethyl group,  $R^4$  is hydrogen or alkyl group,  $p$  is an integer of from 2 to 10 and  $q$  is an integer of from 1 to 100, with the proviso that the compound at least carries two hydroxy groups; a polyol; or a saccharide; and

c) a non-ionic detergent,

thereby reducing unspecific binding and/or cross-reactivity and/or disturbing effects of matrices.

29. (New) The method of Claim 28, wherein said aqueous solution further comprises a protein in an amount effective to immunologically block non-specific antibody binding.

30. (New) The method of Claim 29, wherein the protein is selected from the group consisting of bovine serum albumin, ovalbumin, casein, and fetal bovine serum.

31. (New) The method of Claim 29, wherein the concentration of the protein is in the range of 0.1 to 2 % w/v.

32. (New) The method of Claim 28, wherein the solution comprises a salt selected from the group consisting of NaCl, KCl, and  $NH_4Cl$ .

33. (New) The method of Claim 28, wherein the solution has an ionic strength of 100 mM to 1.5 M.

34. (New) The method of Claim 28, wherein the buffer is selected from the group consisting of Tris (Tris(hydroxymethyl)-aminomethane, Pipes (Piperazine-1,4-bis-2-ethane

sulfonic acid), Mes (4- Morpholino ethane sulfonic acid), Hepes (4-(2-hydroxyethyl)-1-piperazine- ethane sulfonic acid), and phosphate buffer.

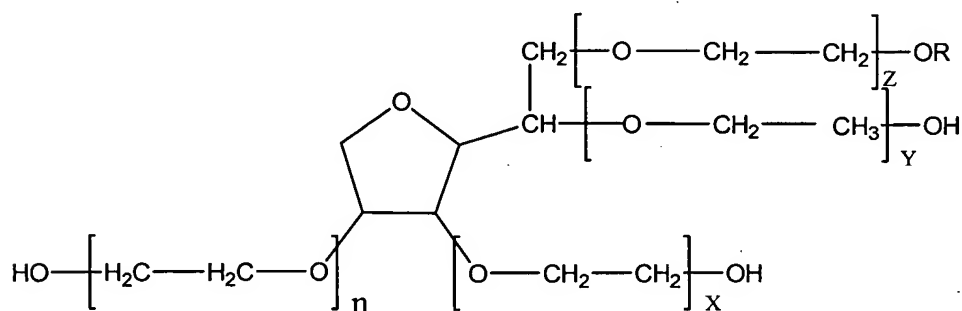
35. (New) The method of Claim 28, wherein the compound A is selected from the group consisting of polyalkylene glycol, polypropylene glycol, propylene glycol, polyethylene glycol, ethylene glycol, monosaccharides, disaccharides, trisaccharides, saccharose, mannose, trehalose, polyol, glycerol and mixtures thereof.

36. (New) The method of Claim 28, wherein the concentration of the compound A is in the range of 0.5 to 25 % v/v.

37. (New) The method of Claim 28, wherein the non- ionic detergent is a compound of the general formula selected from the group consisting of:

a) a substituted phenyl residue having substituents  $R^1$  and  $R^2$  ( $R^1$ -Ph- $R^2$ ), wherein  $R^1$  is  $C_1$ - $C_9$  a alkyl group, and  $R^2$  is a  $-O-[CH_2-CH_2-O]_a-H$  group, wherein "a" is an integer of 5 to 40, wherein  $R^2$  in respect to  $R^1$  is in para, meta or ortho position, and

b)



wherein n, x, y and z together is an integer of 5 to 40, R is a fatty acid residue.

38. (New) The method of Claim 28, wherein the non-ionic detergent is selected from the group consisting of Dodecylpoly(ethyleneglycolether)<sub>m</sub>, wherein m is an integer of 5 to 40; 1-O-n-Octyl-β-D-glucopyranoside (n-Octylglucoside); Alkylphenolpoly(ethylene-glycolether)<sub>m</sub>, wherein m is an integer of 5 to 40; Alkylphenolpoly(ethylene-glycolether)<sub>m</sub>, wherein m=11 (Nonidet Page); 1-O-n-Dodecyl-β-D-glucopyranosyl (1-4)α-D-glucopyranoside; Dodecylpoly-(ethyleneglycolether)<sub>m</sub>, wherein m is an integer of 5 to 40; Dodecylpoly-(ethyleneglycolether)<sub>m</sub>, wherein m = 23 (Brij35®); Poly(oxyethylene)(20)-sorbitane mono fatty acid ester; Poly(oxyethylene)(20)-sorbitane monooleate (Tween®80); Poly(oxyethylene) (20)-sorbitane monolaurate (Tween®20); Poly(oxyethylene)(20)-sorbitane monopalmitate

(Tween®40); Poly(oxyethylene)(20)-sorbitane monostearate); Octylphenolpoly(ethylene-glycolether)<sub>m</sub>, wherein m is an integer of 5 to 40; and Octylphenolpoly(ethylene-glycolether)<sub>m</sub>, wherein m=10 (Triton®X 100).

39. **(New)** The method of Claim 28, wherein the concentration of the non-ionic detergent is in the range of 0.1 to 1.0 % v/v.

40. **(New)** The method of Claim 28, wherein the ratio of the non-ionic detergent to the compound A is from 1:15 to 1:25.

41. **(New)** The method of Claim 28, wherein the aqueous solution does not contain dithiothreitol.

42. **(New)** The method of Claim 28, wherein the pH is adjusted in the range of 5.6 to 9.6.

43. **(New)** The method of Claim 28, wherein the aqueous solution has the capability of reducing unspecific binding, cross-reactivity, and disturbing effects of the matrices.

44. **(New)** The method of Claim 28, wherein the aqueous solution has the capability of preventing the low-affinity binding with  $K_D$  values of up to  $10^{-7}$  M.

45. **(New)** The method of Claim 28, wherein the aqueous solution has the capability of preventing the low-affinity binding with  $K_D$  values of up to  $10^{-7}$  M and reducing the mid-range affinity binding with  $K_D$  values in the range of between  $10^{-7}$  M and  $10^{-8}$  M by at least 90 %.

46. **(New)** The method of Claim 28, wherein the aqueous solution has the capability of preventing the low-affinity binding with  $K_D$  values of up to  $10^{-7}$  M and reducing the mid-range affinity binding with  $K_D$  values in the range of between  $10^{-7}$  and  $10^{-9}$  by at least 90 %.

47. **(New)** The method of Claim 28, wherein the aqueous solution has the capability to increase the binding activity or affinity of antibodies.

48. **(New)** The method of Claim 28, wherein said binding pair is antibody-antigen binding pair.

49. **(New)** The method of Claim 28, wherein said binding pair is receptor-ligand binding pair.